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Operational Sequencing in a Joint Maritime Environment

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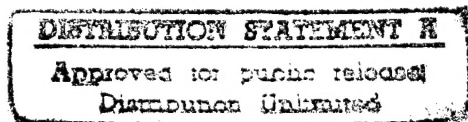
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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Joint Maritime Operations syllabus.

The contents of this paper reflect my personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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ABSTRACT

This essay examines the concept of operational sequencing in a joint maritime environment. The essay begins by defining operational sequencing through research of current joint doctrine, analyses and studies. Next, a case study is analyzed. The case study, the Central Pacific Campaign, serves to illustrate operational sequencing in a joint maritime environment. Lastly, the essay examines operational sequencing as it relates to current U.S. Naval Doctrine. The purpose of this research is two-fold. First, "when the principles of war have been more or less successfully defined, the way is open to a clearer comprehension of naval warfare and a more accurate perception of the causes of success or failure in naval campaigns."¹ Second, the research is designed to judge the relevance of this concept in a joint maritime environment and determine its possible inclusion in U.S. Naval Doctrine Publication 3, Naval Operations.

Introduction

Since the passing of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, there has been tremendous emphasis on the development of Joint Doctrine for the Armed Forces of the United States. Today, the Department of the Army leads the way in the development of Joint Doctrine, and rightly so. The theory of war began with the works of Sun Tzu and Clausewitz, and "throughout history the elucidation of the theory of war has been almost entirely the work of soldiers."² As the Army leads the way, the other services feel compelled to follow suit and sometimes attempt to adapt doctrine developed by "sister services" in a way that may not be suitable to their particular form of warfare. Clearly the principles of war apply to all forms of warfare, but are the various tenets of operational art equally applicable to each service?

In the study of the theory of war, the sailor views the world quite differently than the soldier. The soldier views the world in terms of contrasting terrain, whereas the sailor views the world in terms of its vast ocean areas. Corbett describes this contrast between the soldier and the sailor in his book Some Principles of Maritime Strategy. In his chapter on inherent differences in the conditions of war on land and on sea he states:

"The practical value of the military maxim is based upon the fact that in land warfare it is always theoretically possible to strike at your enemy's army (....) But at sea this is not so. In naval warfare (...) it is possible for your enemy to remove his fleet from the board altogether. He may withdraw it into a defended port where it is absolutely out of your reach (....) No amount of naval force, and no amount of offensive spirit, can avail you. The result is that in naval warfare an embarrassing dilemma tends to assert itself. If you are in a superiority that justifies a vigorous offensive and prompts you to seek out your enemy with a view to a decision, chances are you will find him in a position where you

cannot touch him."³

Corbett's observation suggests that the various tenets of operational art may not be equally applicable to each service. The concept of operational sequencing, a fundamental principle of operational design, is one of these tenets.

The History of Operational Sequencing

The concept of operational sequencing was first developed by M. N. Tushachevsky. Considered by many to be the father of Soviet Operational Art, much of Tushachevsky's work deals with the rationale for sequencing major operations during a campaign. In his manuscript New Problems in Warfare, Tushachevsky attributes the need to sequence operations to the changing nature of the battlefield. The ability of an army to destroy an opponent in one decisive battle vanished toward the end of the Napoleonic era. Both the American Civil War and World War I clearly demonstrated this. Tushachevsky challenged the importance of one decisive battle and instead emphasized the importance of conducting successive operations.⁴ Eventually the rejection of the concept of a single decisive battle, and the acceptance of the concept of successive operations, focused the attention of theorists on the realm between strategy and tactics, and hence the creation of the operational art.⁵ Tushachevsky concluded that by sequencing his tactical actions or major operations, he was able to selectively concentrate his forces in time and space to create overwhelming force against critical vulnerabilities, thereby allowing him to attack his enemy's center of gravity indirectly. Operational sequencing became a product and manifestation of thinking at the operational level of war.

Operational Sequencing Defined

Operational sequencing is defined as the arrangement of events within a major operation or campaign in the order most likely to achieve the elimination of the enemy's center of gravity.⁶ Operational sequencing is a process by which the commander establishes a logical progression of operations and tactical actions, providing decision points and ensuring a flexible approach. The purpose of operational sequencing is to enhance one's own strength and accentuate the enemy's weaknesses through the application of asymmetrical force. Through operational sequencing the commander gains a clear picture of the relationships between planned and unfolding events.⁷ Operational sequencing can be conducted sequentially or simultaneously. The best arrangement of major operations will often be a combination of simultaneous and sequential operations to achieve the desired end state quickly and at the least cost.⁸ Factors to be considered in deciding the optimal sequence of actions include the physical environment, command structure and relationships, possible enemy reinforcements, operational logistics and sustainment, and sometimes public opinion.⁹

Phases

Operational sequencing determines phases, branches and sequels. A phase is a period of time when a large number of forces are involved in similar activities, whereas a shift in emphasis would generally denote transition to another phase. The purpose of a phase is to organize diverse actions in more manageable parts, allowing flexibility in execution.¹⁰ Normally, the aim of a phase is to achieve an intermediate goal.¹¹ A phase should represent a natural subdivision and should be event oriented rather than time oriented.¹² Each phase should lay the groundwork for

the subsequent phase(s).¹³ Of course, phases may occur simultaneously or sequentially.¹⁴ In a campaign, each phase represents a single or several major operations, whereas in a major operation, a phase comprises a single large battle or series of engagements.¹⁵ The reasons for a change in phase include: the opponent reacts as anticipated, the intermediate objective of the phase is met, additional forces or assets become available, a change in command relationships is required, the sector of main effort changes, or political considerations change the emphasis of operations.¹⁶

Branches and Sequels

A branch is a contingency plan or option. Branches allow the operational commander to act faster than his opponent by anticipating enemy reactions that could alter the basic plan.¹⁷ Sequels are subsequent tactical actions or major operations based on the possible outcome of the courses of action selected.¹⁸ Branches and sequels provide flexibility because they accelerate the operational-level decision cycle by anticipating courses of action.¹⁹ The beginning of each sequel generally indicates the start of a new phase.²⁰ The planning of branches and sequels is a continuous process.

Ends, Means and Ways

To develop the operational sequence, one must first determine the desired end state and the means to attain it. In determining the desired end state, the commander must consider his guidance, the ultimate objectives of the military operation, and the enemy's critical factors. The objective guides sequencing decisions and enables a planner to harmonize actions.²¹

Next, the operational commander is allocated resources to conduct the operation. Operational sequencing correlates these means to actions.²² These resources provide the capability to conduct maneuvers, fires, deception, protection, sustainment, and supply reserves. Often the means available do not equal the demand. To effectively economize operational sequencing, the operational commander must harmonize the scale of actions with available resources.²³

With these inputs, the commander develops the operational idea or scheme. This is the way in which the commander intends to conduct the operation. In developing the operational scheme the commander uses the process of operational sequencing to cycle capabilities against the enemy's critical factors to produce mass, economy of force, tempo and momentum in obtaining his tactical and operational objectives. Operational sequencing unifies the aim, places strength against vulnerability, and enhances and sustains momentum.²⁴

The Central Pacific Campaign

The campaigns in the Pacific during World War II serve to illustrate the elements of operational sequencing in a joint maritime environment. The campaigns were essentially along two separate lines of action. General MacArthur developed a campaign plan for his move through the Southwest Pacific while Admiral Nimitz developed a separate but parallel campaign plan for his Central Pacific drive toward Japan.

In the spring of 1943 the Navy argued to the Joint Chiefs of Staff that an Allied advance from the direction of Australia through New Guinea, the Philippines, and Formosa to Japan would be exposed to constant attack on its right flank from successively, the Ellice Islands in the east, the

Gilberts, the Marshalls, the Carolines, and the Palau group to the west.²⁵ Therefore, it was contended that a second campaign was required in the Central Pacific to shield MacArthur's right flank and to open up the lines of communication between Pearl Harbor and Australia-New Zealand. In the summer of 1943, Admiral Nimitz, Commander in Chief Pacific Ocean Area (CINCPOA), recommended the Granite Campaign Plan to Admiral King, Commander in Chief of the Navy (COMINCH), that called for the first big move in the Central Pacific and the capture of the Gilbert Islands.

Guidance, Objectives, and Desired End State (Ends)

The guidance for the Central Pacific Campaign was eventually provided by the Combined Joint Chiefs of Staff when they approved the Campaign Plan for Operations of the Pacific Oceans Areas, 1944 GRANITE on 23 December 1943. It stated:

"The mission of the forces of the PACIFIC OCEAN AREAS is to establish our sea and air power, and if necessary, our amphibious forces in positions from which the ultimate surrender of JAPAN can be forced by intensive air bombardment, by sea and air blockade, and by invasion, if necessary, in order to force the unconditional surrender of JAPAN."²⁶

Additionally, U.S. forces in the Pacific Ocean Area were to:

"Maintain and extend unremitting pressure against Japan; apply the maximum attrition to JAPAN's air force, naval forces, and shipping by all possible means in all possible areas; and establish and protect sea and air communications which support the positions occupied by all our forces in the PACIFIC OCEAN."²⁷

This guidance harmonized sequencing decisions by operational commanders at all levels.

Resources (Means)

Nimitz's allocation of ships and aircraft for the Central Pacific Campaign had to be made in consideration of the needs of Halsey and

Macarthur's Southwest Pacific Campaign. Resources were scarce because the Japanese still held the Aleutians and no forces could be spared from the Central Solomons operation.²⁸ To conduct the Central Pacific Campaign, Nimitz expected to have a huge fleet with many new ships at his disposal, including ten fast carriers, seven escort carriers and a dozen battleships, but there was a serious shortage of attack transports, assault ships and commercial shipping.²⁹ Sequencing the assets between theaters turned out to be the answer. In conducting these campaigns, Nimitz had to sequence his naval assets between the Central and South Pacific, essentially using one ship to do two jobs.

Sequencing

At the strategic level, the Granite Campaign Plan laid out the sequence of operations in the Pacific Ocean Area as follows:

Operation	Mission	Target Date	Commander
Galvanic	Capture of Tarawa and Makin	19 November 1943	Spruance
Flintlock	Capture of Kwajalein	31 January 1944	Spruance
Hailstone- Forearm	Air Attack on Truk Capture of Emirau	24 March 1944	Spruance Halsey
Mercantile	Capture of Manus	24 March 1944	MacArthur
Catchpole	Capture of Eniwetok	1 May 1944	Spruance
Gymkhana- Roadmaker	Capture of Truk and Mortlock	1 August 1944	Spruance Halsey
Forager	Capture of Tinian, Saipan, and Guam. ³⁰	1 November 1944	Spruance

The plan was designed to apply asymmetrical force by massing against lightly garrisoned, yet strategically important objectives. The major factor in determining this sequence was the operational range of land-based air, because each operation was to be executed under a land-based air

umbrella. The following chart describes the sequence of major operations in the Central Pacific Campaign as they actually occurred:

Operation	Island Group	Island Invaded	Dates*
Galvanic	Gilberts	Tarawa and Makin Atolls	20-24Nov 1943
Flintlock	Marshalls	Kwajalein Atoll	31Jan-05Feb 1944
Catchpole	Marshalls	Eniwetok Atoll	17-23Feb 1944
Forager	Marianas	Saipan	16Jun-09Jul 1944
		Tinian	24Jul-01Aug 1944
		Guam	21Jul-10Aug 1944

*D-Day until the objective was announced secure.

At the operational level, Vice-Admiral Spruance sequenced his task forces throughout the Central Pacific Campaign. The concept for the Central Pacific Campaign was that the Fifth Fleet under Spruance would move into its objective. Then, the Fast Carrier Force (TF 50), originally commanded by RADM C. A. Pownall, and later commanded by RADM M. A. Mitscher, would conduct operational fires against enemy land-based air to isolate the objective. Next, the Amphibious Force (TF 54), under Rear Admiral R. K. Turner, would land the troops and their supplies, and the Amphibious Corps (TF 56), under Major General H. M. "Howlin' Mad" Smith, would capture the islands. Command would shift from Turner to Smith when the Amphibious Corps was established on land. When the islands were secured, command would pass to Rear Admiral J. H. Hoover, commander of the Land-Based Air Force (TF 57), who was responsible for construction of air bases and port facilities, their defense, and their use to project power against the next objective. Throughout the Central Pacific Campaign these forces were sequenced by Spruance to produce mass, economy of force, tempo and momentum in obtaining his tactical and operational objectives.

Simultaneous vs. Sequential Operations

In Operation Galvanic, Flintlock and Forager, Spruance had to take multiple islands in order to secure the objective. The Japanese, with their fleet anchorages in the region, could respond with a large naval force within a few days of being made aware of the location of the assaults. Anticipating possible enemy reaction, Spruance planned to take the islands simultaneously. Conducting the assaults simultaneously allowed sufficient time to secure the beach head and move command of the operation ashore prior to the anticipated arrival of the Japanese Fleet. If the assaults were made sequentially, the secondary assaults could have been endangered by attack from the Japanese Fleet during their most vulnerable phase, the landing.

Phases

At the strategic level, the Granite Campaign Plan had six phases, each represented by a major operation. These operations were designed to achieve intermediate goals. For example, the intermediate aims of Operation Flintlock were:

"Secure control of the MARSHALL ISLANDS, by capturing, occupying, defending and enveloping bases therein, in order to prepare to gain control of the CAROLINES, to inflict losses on the enemy, to improve the security of lines of communication, and to support other operations in the PACIFIC (....)"³¹

These six operations were phases that represented natural subdivisions. Each operation was predicated on controlling an island group that could provide land-based air support to the next. The statement in the campaign plan, "(...) timing is purely tentative."³², indicates that the phases were event oriented rather than time oriented.

In the Central Pacific Campaign each operation laid the groundwork

for a subsequent operation. The sole purpose of Operation Galvanic was to provide bases from which to project power for the invasion of the Marshalls. In the initial plan, the idea was to go directly to the Marshalls from Pearl Harbor, but without the Gilberts, they would be without land-based air support, making the operation far too difficult.³³ Therefore, it was decided to take the Gilberts first and to support this invasion with land-based air from the American held Ellice Islands.

At the operational level, Spruance's assaults of the Central Pacific Campaign were planned and executed in eight phases: assembly of forces, training, planning, rehearsal, embarkation, assault, garrison, and reconstitution. These phases denoted periods of time when a large number of forces would be involved in similar activities.

Branches

At the strategic level the Granite Campaign Plan offered a branch when it stated:

"A major fleet action, although it may delay amphibious operations for a brief period, will greatly accelerate them thereafter."³⁴

Spruance executed this branch in the "Marianas Turkey Shoot" that took place during Operation Forager. In the move to take the Marianas, the Japanese Fleet was finally lured into battle. Spruance's fast carrier force maintained a defensive position to protect the amphibious shipping from air assault. The branch allowed Spruance to act faster than his opponent by anticipating enemy reactions that could alter the basic plan.

At the operational level, the Granite Campaign Plan furnished a branch in the concept of operations for Operation Forager by providing the option of taking Guam separately from Saipan and Tinian, or taking all

three simultaneously.

"The MARIANAS will be secured by operations in three phases. If the strategic situation and availability of means is sufficiently favorable, the second phase may be omitted and GUAM, SAIPAN, and TINIAN captured simultaneously."³⁵

In the execution of Operation Forager, Spruance used this branch by planning to take all three islands simultaneously. When the Japanese Fleet arrived on the scene he declined this option, delayed the invasion of Guam, and used the assault forces for Guam as a reserve for the invasion of Saipan.

The availability and possible use of reserves is a branch that was built into all of the amphibious operations of the Central Pacific Campaign. Spruance engaged his reserves to provide operational momentum and decide the outcome of the battle. On D-day plus one of Operation Galvanic, the Southern Attack Force engaged its reserves on Tarawa, turning the tide in that battle. During the Saipan invasion, the Second and Fourth Marine Divisions went ashore on 16 June 1944, as the primary assault. At dusk on the 16th, the corps reserve was ordered ashore. The decision to commit the reserve early was forced by the fact that the opposing force on Saipan had been numerically underestimated. Additionally, the Japanese Fleet had gotten underway from the Philippines and Spruance was preparing for a major naval action. In light of the ensuing fleet engagement, Spruance called off the invasion of Guam scheduled for June 18. The Guam invasion force then acted as an extra reserve for the unexpectedly difficult task of conquering Saipan.³⁶ The built in option of reserves averted disaster at both Tarawa and Saipan.

Sequels

Operation Gymkhana, the capture of Truk, was a sequel operation built

into the Granite Campaign Plan whose execution was fully dependent on the outcome of the operations prior to it. The campaign plan stated:

"The final decision as to the necessity for (... the capture of TRUK) will depend on the results of preceding operations to reduce enemy fleet strength, upon the results of reconnaissance yet to be obtained, and upon the general situation as it develops. TRUK may be by-passed if the necessary control of the CAROLINES and minimum necessary base facilities can be secured without its capture."³⁷

Operation Gymkhana was never executed because the capture and consolidation of Kwajalein, Majuro, and Eniwetok, together with the successful fleet air operations against Truk and the Marianas forced the Japanese Combined Fleet to retreat from Truk Atoll to the Palau Islands in the Western Carolines.³⁸

Operation Catchpole, the invasion of Eniwetok, is a classic sequel operation. Operation Catchpole was fully dependent on the results at Kwajalein and was a product of securing Kwajalein Atoll without engaging reserves. Spruance moved up the invasion of Eniwetok Atoll from May to February by using the reserves at Kwajalein as the primary assault troops for Eniwetok. In this case, the sequel provided flexibility in the operational-level decision cycle by anticipating the next course of action.

The flexibility created by branches and sequels built into the Granite Campaign Plan permitted the Central Pacific Campaign to be executed using only four of the originally proposed major operations. In doing so, the Central Caroline Islands, including Truk, and the Palau Islands, including Yap, were by-passed, saving thousands of American lives.

Operational Sequencing and Naval Doctrine

As a regional situation changes from peace, to crisis, to conflict, the Navy is called upon to conduct missions that are vital to U.S. national security. As the situation changes, these missions evolve into phases that

range from stability operations and crisis response, to forcible entry and sustained operations. A synthesis of current U.S. Naval Doctrine reveals that the Navy intends to employ its forces during this spectrum of conflict in four distinct and mutually supportive phases. They are forward presence, battlespace dominance, power projection and force sustainment.

Forward Presence Phase

During times of peace, naval forces are called upon to provide forward presence operations. Forward presence demonstrates commitment, underwrites regional stability, and extends conventional deterrence.³⁹ The basic forward presence building blocks are the Aircraft Carrier Battle Group and the Amphibious Ready Group with Marine Expeditionary Units embarked. These building blocks are forward deployed to support the national military strategy of engagement and to respond to a wide range of contingencies.

Battlespace Dominance Phase

During times of crisis response, forward deployed naval forces are called upon to respond rapidly. In doing so they establish battlespace dominance by controlling the local sea and airspace. Battlespace dominance permits access from the sea and enables additional options during crisis.

Power Projection Phase

During the transition from crisis to conflict, battlespace dominance serves as the logical pre-requisite for the projection of power ashore.⁴⁰ Naval forces project power ashore through maneuver from the sea which masses force rapidly, generating offensive power. Power projection requires mobility and flexibility and is designed to apply strength against weakness. During this phase, naval forces serve as the transition force as

land-based forces are brought forward into the theater.⁴¹

Force Sustainment Phase

During sustained operations, success will depend on the delivery of heavy equipment and the resupply of major ground and air elements engaged forward.⁴² Force sustainment requires open sea lines of communication so that passage of shipping is not impeded by an adversary.⁴³ In this phase, naval forces will assume critical roles in the protection of vital sealift along the strategic lines of approach to the theater of conflict.⁴⁴

These four phases organize diverse actions into more manageable parts, represent natural subdivisions, and lay the groundwork for subsequent phases. Although U.S. Naval Doctrine clearly states that battlespace dominance is a pre-requisite for power projection, force sustainment occurs throughout these four phases of employment. As the synthesis shows, the concept of operational sequencing is fully imbedded within existing U.S. Naval Doctrine.

Conclusions

Although there are inherent differences in the conditions of war on land and on sea, it appears that the various tenets of operational art are equally applicable to the naval service. Analysis of the Central Pacific Campaign clearly illustrated the essential elements of operational sequencing. Nimitz and Spruance successfully employed this concept in a joint maritime environment to produce mass, economy of force, tempo and momentum in their drive across the Pacific. The phases, branches, and sequels built into the Granite Campaign Plan enabled them to anticipate courses of action and save American lives. Reserves played a large role in

the execution of branches and sequels during the campaign and will continue to do so in the future. Resources and logistics were the limiting factors in the sequencing decisions of the Central Pacific Campaign and will be even more so in a near simultaneous two Major Regional Contingency (MRC) environment.

Synthesis of current U.S. Naval Doctrine revealed that the Navy views the employment of naval forces in four distinct and mutually supportive phases. They are forward presence, battlespace dominance, power projection and force sustainment. In combining the analysis of the historical case study and current U.S. Naval Doctrine it appears that the concept of operational sequencing is fully imbedded within customary U.S. Naval Doctrine. Therefore, the concept of operational sequencing should be codified in Naval Doctrine Publication 3, Naval Operations.

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